

AIR WAR COLLEGE

AIR UNIVERSITY

INTUITION: A NEEDED COMPONENT OF LEADERSHIP FOR
DECISION-MAKING IN TODAY'S TECHNOLOGY DRIVEN AIR
FORCE

by

Douglas J. Slater, Ch, Lt Col, USAF

Advisor: Professor Gene Kamena

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

15 December 2009

DISCLAIMER

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

ABSTRACT

Deductive and technological data driven decisions are easy to support and defend when a decision results in failure but the best decision may not always be made when those tools are solely relied upon. This paper will show that the inductive or intuitive process should not be ignored and is also a critical component of leadership. Intuition needs to be identified, developed and utilized by the leader in a technology driven Air Force. Intuition is defined in the paper as the ability to subconsciously access and combine previous experiences, knowledge and life situations in a rational non-linear style to arrive at a conclusion that does not have readily apparent and communicable logical fact based data to support the conclusion. What is intuition, does everyone have intuition, and how can the leader use intuition in the decision-making process are answered in the paper. The research will demonstrate as technology provides vast quantities of data quickly to the decision maker, intuition should be a tool available to the leader. Two case studies demonstrate how intuition can impact decision-making. The first case study presents intuition from the perspective of a grandmaster of Chess and an experiment that was created to test intuition. The second case study uses George Keenan's life to illustrate how intuition was utilized to set in motion the United States Containment policy that ultimately led to the end of the Cold War. This paper concludes with three recommendations to solidify intuition as a critical component of leadership: First, provide Airmen insight into their intuitive skills using the MBTI, second, develop AF leadership doctrine including intuition as a key component, and third, educate, train and assign Airmen in new ways to best develop and exercise their intuitive capabilities.

Contents

Certificate.....	1
Abstract.....	2
Contents.....	3
Introduction.....	4
The Nature of the Intuitive Leader.....	6
What Is Leadership?.....	6
The Influence of Technology On Leadership and Decision-making.....	8
What Is Intuition?.....	9
Does Everyone Have Intuition?.....	11
Decision-making and The OODA Loop.....	11
Case Studies of Intuition In Decision-making.....	12
Scientific Experiment of Chess and Intuition.....	12
George Kennan, Containment, and Intuitive Perspective.....	14
Analysis.....	18
Recommendations.....	21
Evaluate Airmen.....	21
Include Intuition In Doctrine.....	21
Develop Intuition.....	22
Conclusion.....	22
Bibliography.....	24

Introduction

Air Force (AF) Doctrine Document 1-1 (AFDD 1-1) states, “Effective leadership transforms human potential into effective performance in the present and prepares capable leaders for the future.”¹ Ensuring leaders are trained, in the right place at the right time to decisively make decisions and carry out their mission is critical in today’s AF. This paper demonstrates intuition is a critical component of leadership and should be utilized always in the decision-making process. Carl Von Clausewitz described the military leader as “Genius” and stated that a leader should possess the qualities of coup d’oeil (“the inward eye” or intuitive thought process) and determination. He realized the leader would be under stress as more information became available for decision-making, that “intellect” was required to see truth in the darkest hour and needs “courage” to follow the glimmer of truth.² Almost 200 years have gone by since Clausewitz wrote of these leadership traits. Available information is delivered to leaders by technology at a faster rate than Clausewitz could have imagined, creating an advanced battle space for decision-making. Clausewitz would probably not recognize the technologically advanced battle space today, but would he still see the value for today’s leader to develop and utilize the intuitive intellect?

Technology provides leaders with the ability to forecast, calculate, research, and make decisions quickly today. Michael Malone in his book *The Future Arrived Yesterday* describes the growth of semiconductor technology since 1964 and how it has exponentially grown to the “equivalent of putting all of the world’s computing power of 1990 into a single Apple iPhone.”³ General Jumper wrote in the AFDD 1-1, “Leaders do not appear fully developed out of whole

¹ Air Force Doctrine Document 1-1, 18 February 2006, 1.

² Michale Howard and Paret Peter; editors, *Carl Von Clausewitz, ON WAR*, (Princeton University Press, Princeton, NJ, 1976), 102.

³ Michael S. Malone, *The Future Arrived Yesterday*, (Crown Business, NY, 2009), xvi.

cloth. Maturation occurs allowing young leaders to grow into the responsibilities required of senior institutional leaders and commanders.”⁴ As Clausewitz indicated the leader should have or develop a linear and non-linear aspect to apply to the decision-making process.

This paper develops the idea that intuition is a critical component of leadership and should be valued and embraced in the decision-making process of every leader. The paper defines leadership, list some key components and some impacts technology has on decision-making. Intuition is explored in relationship to the deductive and inductive thought process and if all people have intuitive thought process potential. If so, can the potential be uncovered and developed? The first section concludes with two case studies of intuitive thinking and process: The first study relates the game of chess and intuition in a scientific experiment. The second case study connects intuition with George Kennan’s strategy of containment during the Cold War. The next section will analyze the research and implications of intuition, followed by recommendations for future application of intuition as a key component of leadership.

⁴ Air Force Doctrine Document 1-1, iii.

The Intuitive Nature of the Leader

This section defines leadership for the purpose of relating intuition as a component of leadership, technology as it exists today and how it can hinder and or help decision-making. Additionally, this section examines two case studies from the aspect of science and history to understand intuition as a critical component of leadership.

What Is Leadership?

Leadership has many definitions. Leadership should inspire change and movement towards an objective and have a core set of component characteristics that are inherent in meeting the desired objective. The book, *Transformational Leadership*, indicates leaders should, "...stimulate and inspire followers to both achieve extraordinary outcomes and, in the process, develop their own leadership capacity."⁵ The leader needs the ability to see the objective clearly and have the spirit to influence others towards an objective. Chapman states in *Muddy Boots Leadership*, military services agree on three principles: "Know yourself, know your job, and set the example"⁶. Bennis describes the leader as curious about the surrounding world, ceaseless in pursuit of knowledge, not afraid of taking risks and moving from the status quo. He says leaders, "...embrace errors, knowing they will learn from them."⁷

A key trait of leadership is the concept of movement from the present toward a future objective requiring a decision. AFDD 1-1 defines leadership as "the art and science of influencing and directing people to accomplish the assigned mission."⁸

⁵ Bernard M. Bass, and Ronald E. Riggio, *Transformational Leadership*, second edition. (Lawrence Erlbaum Associates, Inc; Mahwah, New Jersey, 2006), 3.

⁶ John Chapman, *Muddy Boots Leadership*. Stockpile Books, Mechanicsburg, PA, 2006, xiii.

⁷ Warren Bennis, *On Becoming A Leader*. (Basic Books, New York, 2003), 33.

⁸ Air Force Doctrine Document 1-1, 1.

Decisiveness is a leadership characteristic in decision-making. AFDD 1-1 highlights the leader's thought process must consider safety and risk weighted proportionally in respect to the objective when making decisive decisions.⁹ In today's AF, there are many tools to assist the leader. Technology is one such tool.

The Influence of Technology On Leadership And Decision-making

In the October 2008 issue of PC Magazine, Jennifer DeLeo in the article "How Tech Has Changed Our Lives" outlines the good and bad of technology's influence. She states, "We treat technology as a family member...". Email replaced the Post Office with instant communication worldwide. We can now make travel plans, shop, and bank on-line from our home.¹⁰

DeLeo indicates technology can be helpful and frustrating causing us to be overwhelmed when the technology doesn't work correctly. She uses the example of a Global Position System (GPS) providing instructions to turn the wrong way down a one-way street and the fatal implications of that decision.¹¹

The AF invested in and adopted technology into war fighting capabilities. AFDD-1 states, "...The AF is committed to innovation to guide research, development, and fielding of unsurpassed capabilities."¹²

⁹ Ibid., 3.

¹⁰ Jennifer Deleo. "How Tech Has Changed Our Lives". PC Magazine; <http://www.pcmag.com/article2/0,2817,2332338,00.asp>

¹¹ Deleo, "How Tech Has Changed Our Lives".

¹² Air Force Doctrine Document 1, 17 November 2003, 74.

Technology revolutionized the gathering and recognition of information via, "...space-based systems; manipulation of information; precision; and small, smart weapons...".¹³ The rapid and enormous quantity of data provided can quicken or overwhelm decision-making depending on the situation.

A premise of AF doctrine is to nurture and promote our technological tools translating gathered information into operational capabilities in all situations and avoid being surprised.¹⁴ Doctrine implies the integration of "...platforms and people into a greater, synergistic whole..." to maximize our capabilities. To effectively integrate people and technology to produce innovative thinking, the AF must continually invest in Airmen to "foster critical analysis and intellectual flexibility...".¹⁵

Intuition is one way to sort through data and produce innovative thinking. In 1986, there was a concern that corporate leaders were making decisions in a rapidly changing environment often in crisis. Weston Agor, a University of Texas at El Paso professor, psychologist and founder of the Global Intuition Network writes, "...Totally new trends are emerging which make linear projection models based on past trends either inaccurate or misleading."¹⁶ As a result, the brain skill of intuitive leadership began to be studied.

What Is Intuition?

Intuition is a mysterious word, well known but difficult to define. Webster online defines intuition as "quick and ready insight; immediate apprehension or cognition...the power or

¹³ Ibid., 75.

¹⁴ Ibid., 75.

¹⁵ Ibid., 75.

¹⁶ Weston, A. Agor, *The Logic of Intuitive Decision-making* (Quorum Books, New York, 1986), 3.

faculty of attaining to direct knowledge or cognition without evident rational thought and inference”¹⁷

Noddings and Shore outline in their book, *Awakening The Inner Eye*, the history of intuition from ancient views, the Middle Ages, the Renaissance and through the 20th century. The theories of intuition moved from mystical to scientific. The common theme through history is intuition is the ability to see quickly what is not clearly visible to others at that moment in time. Intuition is a way of knowing.¹⁸

Intuition has been referred to as a “hunch” or something void of logic and analysis. Rowan writes, “... in today’s empirical world of business, where the fast track is paved over with MBAs who can figure the risk-reward ration of any decision at the drop of a computer key, the old fashion hunch continues to be an important, though unappreciated managerial tool.”¹⁹ But is the “hunch” or Intuition as Rowan says, “knowledge gained without rational thought”?²⁰

Agor, identified three styles of thought process: the linear left brain, the non linear right brain and the combination of integrated left and right brain styles. The left and right brain styles have traits employed by the individual as a primary way of processing a situation. The left brain process is more analytical and “deductive, relies more on facts to make decisions, prefers hierarchical authority structures, prefers management situations that are structured and carefully planned, prefers solving problems by breaking them down into parts, then approaching the

¹⁷ Merriam-Webster’s Online Dictionary, <http://www.merriam-webster.com/dictionary/intuition>

¹⁸ Nel Noddings and Paul J. Shore, *Awakening The Inner Eye* (Teachers College Press, New York, 1984), 1-43.

¹⁹ Roy Rowan, *The Intuitive Manager* (Little, Brown and Company, Boston, 1986), 3.

²⁰ Ibid., 11.

problem sequentially using logic.”²¹ The right brain process is more intuitive and “inductive, relies more on feelings to make decisions, prefers collegial and participatory authority structures, prefers management situations that are unstructured, fluid, and spontaneous, prefers solving problems by looking at the whole, then approaching the problem through patterns using hunches”.²²

Agor writes, “intuitive decisions come from a capacity to integrate information coming from both the left and the right sides of the brain. It is the product of both factual and feeling cues...”²³ He believes that intuition is not illogical at all. It is an extension of the logical thought process where the steps are not visible, but are hidden in the subconscious part of the brain.²⁴ Experiences, knowledge and training in life situations are an important part of the intuitive process although at the time of the intuitive conclusion the person may not be able to explain how or why the conclusion was reached in a rational sense. As Rowan states, “Not being able to articulate a hazy, indistinct, subliminal impression doesn’t mean that it surfaced by accident. Or that it was pulled from a void.”²⁵ Drawing from the research in this section of the paper, intuition for the purpose of this paper is defined as the ability to subconsciously access and combine previous experiences, knowledge and life situations in a rational non-linear style to arrive at a conclusion that does not have readily apparent and communicable fact based data to support the conclusion.

²¹ Weston, A. Agor, *Intuitive Management* (Prentice-Hall, Inc., Englewood Cliffs, NJ, 1984), 2.

²² Ibid., 2

²³ Agor, *The Logic of Intuitive Decision-making*, 5.

²⁴ Ibid., 5.

²⁵ Rowan, *The Intuitive Manager*, 11.

Does Everyone Have Intuition?

The next logical question is does everyone have intuition and can it be evaluated? The answer is yes. There are many assessment tools that can be administered to determine how strongly the left or right brain functions are accessed. Quick and free self-administered tools can be found by performing an Internet search with Google.com; however, the reliability and validity of the tools cannot be verified. The best-known assessment tool is the Myers Briggs Type Indicator (MBTI).²⁶ The MBTI has been a reliable and valid assessment tool over the last 40 years.²⁷ The MBTI utilizes a sliding scale to provide feedback on how a person takes in information i.e., “Do you prefer to focus on the basic information you take in” (left brain linear thinking referred to as Sensing) “or do you prefer to interpret and add meaning?” (right brain non-linear thinking referred to as Intuition)²⁸ Completing the MBTI will determine the preferred method of taking in information that is utilized to make decisions.

Decision-making And The OODA Loop

Col John Boyd developed the Observation, Orientation, Decision and Action (OODA) Loop in order to gain position inside the enemy time line of action. Enemy engagement had four elements in the decision-making process with the key objective to make your intentions unpredictable while making your opponent’s intentions more clear. The first step in the OODA Loop is to observe the situation. Technology provides air and ground abilities to collect data to assist in observation. However, the collected data requires processing. The second step, orientation, is applied in the decision-making process.²⁹ During orientation observed data is

²⁶ The Myers Briggs Foundation, [Http://www.myersbriggs.org](http://www.myersbriggs.org)

²⁷ Ibid.

²⁸ Ibid.

²⁹ Harry Hillaker, *Tribute To John R. Boyd*, (Code One Magazine, July 1997, Vol 12, No. 3), http://www.codeonemagazine.com/archives/1997/articles/jul_97/july2a_97.html

processed as Boyd said, using “induction, synthesis, and integration...”³⁰ The desired outcome is where, “the thought occurs that a new domain or concept can be formed if we can find some common qualities, attributes, or operations...”³¹ among varying data collected from our senses and systems. Intuition and technology must function together to form a sound decision. In order for the OODA Loop to be effective a decision needs to be made and acted upon.

Case Studies of Intuition In Decision-making

This section of the paper provides two case studies. The first case study presents intuition from the perspective of the chess grandmaster and an experiment created to test intuition. The second case study uses George Keenan’s life to illustrate how intuition was utilized to for the Containment policy implemented during the Cold War.

Scientific Experiment of Chess and Intuition

What do chess and intuition have in common? To play chess well requires a high level of intellect and learning. Professional chess players invest years acquiring knowledge and mastery of the game. Chess appears to be a strategy that requires time to develop the right move. Agor states in his book, *Intuition In Organizations*, “chess playing is thought to involve a highly analytical approach, with players working out systematically the consequences of moves and countermoves, so that a single move may take as much as a half hour’s thought, or more.”³² But Agor goes on to say that the grandmaster can play 50 opponents simultaneously, and the skill

³⁰ John R. Boyd, *Destruction and Creation*, Sept 3, 1976, p. 2
http://www.goalsys.com/books/documents/DESTRUCTION_AND_CREATION.pdf

³¹ *Ebid.*, 3

³² Weston H. Agor, *Intuition In Organizations: Leading and Managing Productively*, (Sage Publications, London, 1989), 28.

level doesn't decrease much from tournament play. The time for each move is between a minute and a few seconds.³³

Agor states the reason the grandmaster can make such rapid decisions while facing 50 opponents is the same reason other professionals can make a rapid decision. He says, "it is done by intuition, by applying one's professional judgment to the situation. A few seconds' glance at the position suggests a good move, although the player has no awareness of how the judgment was evoked."³⁴ Agor states that while a good move is usually in a player's mind a few seconds after looking at the board, the rest of the time is spent analyzing the move to make sure there are no hidden weaknesses. So the move is intuitively seen, but before the move is made tests are applied prior to the actual move being implemented to verify the intuition.³⁵

Agor writes about a scientific experiment to determine the use of intuition in chess by using a grandmaster chess player and a novice chess player. The two players are shown an actual chess game with 25 chess pieces arranged on the board. They are told to look at the pieces on the board for approximately 10 seconds. After which the pieces are removed and both players are asked to reconstruct the pieces on the board as they remembered them. The grandmaster was able to replace 23 to 24 pieces correctly, while the novice was able to replace approximately 6 pieces. The second part of the experiment ruled out the possibility that the grandmaster just had a very good memory. The participants were shown a chess board with 25 pieces arranged this time in a random meaningless order. The grandmaster and the novice were able to replace on average 6 chess pieces.³⁶ What was the difference between the two outcomes?

³³ Ebid., 28.

³⁴ Ebid., 29.

³⁵ Ebid., 29.

³⁶ Ebid., 29.

The grandmaster devoted years of life to mastering the skills of the game. Stored in the grandmaster's memory were, "more than a set of patterns. Associated with each pattern...was information about the significance of that pattern—what dangers it holds, and what offensive or defensive moves it suggests."³⁷ The grandmaster has approximately 50,000 patterns and situations previously experienced and stored in memory.³⁸ Once the grandmaster looks at the board, recognition of the pieces is intuitively seen as a "half a dozen familiar patterns, recognizable old friends."³⁹ The grandmaster uses the intuitive process and quickly sees in the patterns moves that may be appropriate to the situation. The novice did not have the experience or the patterns previously stored in the mind or subconscious to draw from intuitively. This case study demonstrates how a person can subconsciously access and combine previous experiences, knowledge and life situations by a rational non-linear (intuitive) process and reach a viable and valid course of action or decision.

George Kennan, Containment, And Intuitive Perspective

This section of the paper provides a brief overview of the life, work and perspective of George Kennan who was responsible for the containment policy during the Cold War. The fundamentals of the containment policy are not primary to the paper and will not be addressed. The reader can further understand the details of the containment policy by reading Kennan's "Longest Telegram" and pursuing further research.

Many authors have written that George Kennan is the United States most famous diplomat due to his thinking and foresight that became the strategy of Containment toward the Soviet Union during the Cold War. Kennan was well respected, but did not receive fame or

³⁷ Ebid., 30.

³⁸ Ebid., 30.

³⁹ Ebid., 29.

recognition until he wrote the “Long Telegram” and sent it from Moscow to Washington, D.C. in 1946. In fact Kennan had almost resigned his position prior to sending the telegram because he was frustrated and unable to influence any policy changes in regard to the Soviet Union.⁴⁰

Kennan had generally been unable to persuade Washington and the public of his ideas and recommendations over the years and has been misunderstood in his views. As Mayers writes, “His advice and that of his subordinates sometimes complemented, sometimes opposed or sometimes ignored the desires and causes of military planners, partisan politicians, and diverse American allies.”⁴¹

During the mid and late 1930’s Kennan continued his observations and study of the Soviet Union while in Moscow, Washington, D.C, Vienna and Prague. It was during this time that the Soviet Union had support and understanding from reformers and progressives in Europe and the United States. To those looking from the outside in, the Soviet Union deserved respect for being the lone State to stand up to Italy and Germany during the Spanish Civil War. During this time the United States was deep in a depression and people were going without the basic necessities of life. But the Soviet Union had full employment and industrial production. The Soviet Union “to its outside admirers was dynamic, vigilant, prepared to tackle boldly any problem, domestic or foreign.”⁴² A visitor from California could not understand why Kennan didn’t join in the praise and admiration of the Soviet Union. She said, “I just don’t see how you young men can live over here in the midst of all this and not be infected by it, how you can see it with your own eyes and not be thrilled at what a great experiment it all is, how you can fail to

⁴⁰ Christopher T. Jespersen, ed. *Interviews With George F. Kennan*. (Jackson: University Press of Mississippi, 2002), xi.

⁴¹ David Mayers, *George Kennan And The Dilemmas of U.S. Foreign Policy*. (New York: Oxford Press, 1988), 5.

⁴² *Ebid.*, 43.

want to participate in it yourselves.”⁴³ Kennan believed people in the West who viewed the Soviet Union in such high esteem were misinformed and selective in their analysis.⁴⁴ However, after serving in the Soviet Union, he believed that the United States could never be long-term partners with the Soviet Union.⁴⁵

During World War II, Kennan voiced his concerns and doubts about the Grand Alliance with Great Britain and the Soviet Union being a lasting relationship. He saw the relationship as one held together solely on the basis of a shared enemy in Nazi Germany. Kennan noted the great differences between the United States and the Soviet Union as “a lack of common political conceptions and values, by their dissimilar diplomatic traditions, and by the irreconcilability of their economies.”⁴⁶ He believed that a lasting peaceful relationship was not possible and the United States should prepare for a time where relations after the war were not as friendly and amicable as during the war.⁴⁷ Kennan also “warned specifically that Stalin was unlikely to place much faith in the idealistic principles of world peace embodied by the American-inspired United Nations (UN) Charter, nor was Stalin going to be persuaded that the UN’s provisions for collective security could guarantee Soviet safety.”⁴⁸

In fact he went on to predict to his superiors that Stalin would view the UN as a tool of the United States and “the perceived security needs required specific regional arrangements and that the Soviets would force subservient regimes upon any central and east European state occupied by the Red Army.”⁴⁹ Kennan believed that the United States should not look for a

⁴³ *Ebid.*, 43.

⁴⁴ *Ebid.*, 43.

⁴⁵ *Ebid.*, 46.

⁴⁶ *Ebid.*, 46.

⁴⁷ *Ebid.*, 46.

⁴⁸ *Ebid.*, 46.

⁴⁹ *Ebid.*, 46.

peacetime relationship with the Soviet Union after WW II based on his experience and should actively pursue a balance of power strategy in Europe.⁵⁰

Following World War II in July 1944, Kennan returned to Moscow where he wrote a paper titled “Russia- Seven Years After” with the intent to get people to see the illusions and ambitions of the Soviet Union. He knew few people of influence would read his paper and it would not be well received. As Lukacs writes, “he knew that the attitude of both government and public opinion concerning the Soviet Union was marked by a compound of undue illusions, undue thoughtlessness, and unduly short-range military and political considerations.”⁵¹

In February 1946 while Kennan was temporarily in charge of the embassy in Moscow, a routine request from the Treasury Department came in wanting information regarding Soviet intransigence about the World Bank. Kennan took this opportunity to share what became known as the “Long Telegram” and presented the truth from his perspective on the intentions of Stalin. Kennan shared his perspective on and “...laid out in the wire the ‘Kremlin’s neurotic view of the world affairs’ concluding that although ‘impervious to the logic of reason,’ Moscow was ‘highly sensitive to the logic of force. For this reason it can easily withdraw and usually does when strong resistance is encountered at any point.’”⁵² Kennan’s career and recognition quickly moved forward from that point on as his views shaped and formed what became known as the Containment policy used during the Cold War.

Kennan was able to share in the words of the “Long Telegram” a description of Soviet policy and the psychological and sociological foundations of the leaders of the Soviet Union. His

⁵⁰ Ibid., 46.

⁵¹ George F. Kennan and John Lukacs. *George F. Kennan And The Origins of Containment, 1944 – 1946*. (Columbia: University of Missouri Press, 1997), 9.

⁵² Ibid., 9.

telegram bonded together the growing mood of American policy makers and in February 1946 they received and heard his message when prior to that time they had not.⁵³ Ironically, the concept of containment that Kennan shared in his writing was not a new concept, it was not a “developed theory, strategic doctrine, or even concrete policy but a concept of active resistance...a new name for something he had essentially argued for ever since 1938.”⁵⁴ Kennan has been described as an intuitive person and his leadership shaped, changed and influenced the history of the United States for the past half century.

While Kennan’s writings were based in intuition and experience, Dean Acheson, Secretary of State January 1949 – January 1953, moved toward a more practical model of National Security with NSC-68, which President Truman signed in 1950. Acheson said, “I recognized and highly appreciated the personal and esoteric skill of our Foreign Service officer, but believed that insofar as their wisdom was “non-communicable,” its values...was limited in Washington...What {the president} needed was communicable wisdom, not mere conclusions, however soundly based in experience or intuition”.⁵⁵

Analysis

What do technology and intuition have in common? Both are tools to be used by the leader for decision-making. Boyd’s OODA loop’s first two stages, information gathering and processing, are critical for decision-making. Technology can gather information faster than ever before in history. Data is presented in such large quantities that it can paralyze rather than assist the leader or is held as “truth” with the belief the data cannot be wrong. The human mind often

⁵³ Ebid., Jespersen, xiii.

⁵⁴ Anders Stephanson, *Kennan And The Art of Foreign Policy*. (Cambridge, MA: Harvard University Press, 1989), 92.

⁵⁵ John Lewis Gaddis, *Strategies of Containment*. Rev & expanded (Oxford: Oxford University Press, 2005), 85.

must decisively and quickly process mass quantities of data from different sources in relationship to a specific problem and derive a reasonable solution that can withstand critical review and discussion. Intuition is a crucial tool for decision-making.

From the case studies there is evidence that intuition has and is currently employed by very intelligent people educated in their surroundings and successful in strategy. The chess master intuitively used the vast array of experiences of success and failure while learning the game to develop 50,000 patterns and familiar friends. These patterns are subconscious but are drawn upon in the moment of need. The wise chess master when given time will make use of the opportunity to review the intuitive move and validate the move. Yet when time is not available the chess master will use intuition and make the decision based on the “hunch”. This intuitive process yielded excellent results with minimum mission degradation. The case study of John Kennan provided a similar successful use of intuition.

John Kennan from his youth gained knowledge, experience and understanding of the Soviet Union’s culture, politics, and ideology. He spent years immersed in the language, the country, and the traditions of the Soviet Union. Long before WW II, he was able to predict the actions and intentions of the Soviet Union using his intuition. Like the chess master he had stored in his mind and subconscious familiar friends and patterns of information. He was able to intuitively and inductively assimilate the needed information into an effective approach for the United States to follow as the nuclear age unfolded.

Unfortunately, unlike the chess master who can make decisions and act independently, Kennan was not able to communicate his message and idea to senior leadership for years after his intuition led him to his conclusion. Using Boyd’s OODA loop model it appears leadership and the United States population observed the data around them and oriented themselves to the

data without employing the full lenses of linear and non-linear logic. Kennan made the information and strategy of “Containment” available years before it was embraced, but it was not received or a welcomed viewpoint when presented. To have an effective decision-making process, the OODA loop must be completed and action must result. Kennan was not able to communicate his idea in a timely and effective manner to move decision makers to act. To get three-quarters through the OODA loop process is not effective or helpful without action.

The military leader and culture today cannot afford to limit intuition in the decision-making process. With vast amounts of data available via technology, the leader must lean on intuition up and down the chain of command. Intuition is a voice of reason not to be ignored.

Leaders must be decisive and make decisions balancing risk and safety. Technology can cause a decision to be made too slowly justified by data alone. How many times has the GPS provided wrong directions, yet blindly followed? In decision-making leaders have many opportunities to access intuition to carefully balance risk, safety and decisiveness. Technology should be supplemented with linear and non-linear processes. As the leader moves from the observation to the orientation phase of the OODA loop intuition needs to be encouraged in formation of the decision. The MBTI can identify if the leader relies more on inductive or deductive abilities to reach decisions. Ideally leaders should develop inductive and deductive reasoning to formulate decisions. There are exercises leaders can engage in to facilitate growth in intuitive capabilities. This paper will not cover the specifics of intuition development. The reader can consult Weston Agor’s book, *Intuition In Organization* to pursue intuitive development.

A key to effective utilization of intuition is the expertise, experience, and foundation of the person providing input in the decision-making process. Intuition is the ability to subconsciously access and combine previous experiences, knowledge and life situations in a

rational non-linear style to arrive at a conclusion. Both the chess master and Kennan had the background and experience to intuitively access. The leader must be mindful that just as technology and linear processes can lead to faulty and fuzzy conclusions, intuition can mislead leaders in a course of action due to biases, lack of experience or education. Intuition is a key component of leadership in today's technology driven AF. Leaders must utilize linear and non-linear processes in decision-making.

Recommendations

To incorporate intuition as a valued and vital leadership component in decision-making I suggest three recommendations for development and research beyond the scope of this paper.

Evaluate Airmen

Airmen should be evaluated and provided feedback via the MBTI to gain an understanding of their strengths and growth areas in leadership. This information can be used to strengthen and develop intuitive and inductive thinking skills. Evaluation could be accomplished at entry-level training, Squadron Officer School and the Non Commissioned Officer Academy as Airman progress in leadership responsibilities. Intuition should become a routine aspect of the mentoring process and be documented on the performance feedback work sheet.

Include Intuition In Doctrine

AF doctrine fails to recognize intuition as an element of leadership. AFDD-1 states leaders must be decisive. Intuition is a tool for the decisive leader. It is essential to integrate in education and training the non-linear inductive thought process with technology as Airmen develop in leadership. AF doctrine should be developed to provide the foundation and application for the intuitive process and skill set in leadership.

Develop Intuition

Once intuitive abilities have been assessed and doctrine developed, education and leadership development should include exercises utilizing the intuitive nature. Readiness and training exercises can be implemented at base and school levels allowing the leader to utilize intuition in a “risk free” environment. The AF should utilize training and research from the scientific and business communities to enhance intuitive skill development and practice preparing Airmen for leadership roles in their senior years of service. Research on effective leadership development should be conducted to determine if leaders would benefit more by breath of assignments...i.e. varying experiences or depth of assignment...i.e. more specialized experiences. A leadership team comprised of both depth and breath would provide a balanced and complete approach to decision-making. These three recommendations should be developed to insure intuition is included as a core component of leadership in tomorrow’s leaders.

Conclusion

This paper demonstrated intuition is an important component of leadership and should be exercised always in the decision-making process of leaders especially in relationship with technology. Major General Robert H. Scales (RET.) states, “...Teaching commanders how to think and intuit rather than what to think will allow them to anticipate how the enemy will act.”⁵⁶ Technology and intuition should work together in the decision-making processes of the leader. Senior leaders must encourage and advocate for intuitive and deductive solutions during the decision-making process. Three recommendations were provided for implementation to develop intuition in tomorrow’s leaders.

- Provide Airmen insight into their intuitive skills using the MBTI

⁵⁶ Scales, Maj. Gen. Robert H. Scales, *Clausewitz and World War IV*, Armed Forces Journal, July 2006-2007. Army Times Publishing.

- Develop AF leadership doctrine including intuition as a key component
- Research, educate, train and assign Airmen to develop and exercise their intuitive capabilities

In our technology driven AF, senior leaders should encourage and develop intuition skills in subordinates to assist in moving from data to a reasonable solution using all of the key components of leadership.

Bibliography

- Air Force Doctrine Document 1. *Air Force Basic Doctrine*. 17 November 2003, 74.
- Air Force Doctrine Document 1-1. *Leadership and Force Development*. 18 February 2006.
- Agor, Weston H. *Intuition In Organizations: Leading and Managing Productivity*. Newbury Park, CA: SAGE Publications, Inc, 1989.
- Agor, Weston H. *Intuitive Management*. Englewood Cliffs, NJ: Prentice-Hall, 1984.
- Agor, Weston H. *The Logic of Intuitive Decision-making*. New York: Quorum Books, 1986.
- Boyd, John R. *Destruction and Creation*. Sept 3, 1976, p. 2
http://www.goalsys.com/books/documents/DESTRUCTION_AND_CREATION.pdf.
- Bass, Bernard M. and Ronald E. Riggio. *Transformational Leadership*. Mahwah, NJ: Lawrence Erlbaum Associates, 2nd ed., 2006.
- Bennis, Warren. *On Becoming A Leader*. New York: Basic Books, 2nd ed., 2003.
- Caruso, David and Peter Salovey. *The Emotionally Intelligent Manager: How to Develop And Use The Four Key Emotional Skills of Leadership*. San Francisco: 2004.
- Chapman, John. *Muddy Boots Leadership*. Mechanicsburg, PA: Stackpole Books, 2006.
- Deleo, Jennifer. "How Tech Has Changed Our Lives". PC Magazine;
[http:// www.pcmag.com/article2/0,2817,2332338,00.asp](http://www.pcmag.com/article2/0,2817,2332338,00.asp).
- Gaddis, John Lewis, *Strategies of Containment*. Rev & expanded (Oxford: Oxford University Press, 2005), 85.
- Hillaker, Harry. *Tribute To John R. Boyd*, (Code One Magazine, July 1997, Vol 12, No. 3),
http://www.codeonemagazine.com/archives/1997/articles/jul_97/july2a_97.html.
- Jackson, Gerald. *Executive ESP*. New York: Pocket Books, 1989.
- Jespersen Christopher T, ed. *Interviews With George F. Kennan*. Jackson: University Press of Mississippi, 2002.
- Malone, Michael S. *The Future Arrived Yesterday*. New York: Crown Business, 2009.
- Mayers, David. *George Kennan And The Dilemmas of U.S. Foreign Policy*. New York: Oxford Press, 1988.
- Merriam-Webster's Online Dictionary. <http://www.merriam-webster.com/dictionary/intuition>.

Kennan, George F. and John Lukacs. *George F. Kennan And The Origins of Containment, 1944 – 1946*. Columbia: University of Missouri Press, 1997.

The Myers Briggs Foundation. [Http://www.myersbriggs.org](http://www.myersbriggs.org).

Noddings, Nel and Paul Shore. *Awakening The Inner Eye: Intuition In Education*. New York: Teachers College Press, 1984.

Ramo, Simon. *What's Wrong With Our Technological Society And How to Fix It*. New York: McGraw-Hill, 1983.

Rowan, Roy. *The Intuitive Manager*. Boston: Little, Brown and Co, 1986.

Scales, Maj. Gen. Robert H. Scales, *Clausewitz and World War IV*. Armed Forces Journal, July 2006-2007. Army Times Publishing.

Silka, Linda. *Intuitive Judgments of Change*. New York: Springer-Verlag, 1989.

Standage, Tom, ed. *The Future of Technology*. London: Profile Books Ltd, 2005.

Stephanson, Anders. *Kennan And The Art of Foreign Policy*. Cambridge, MA: Harvard University Press, 1989.